

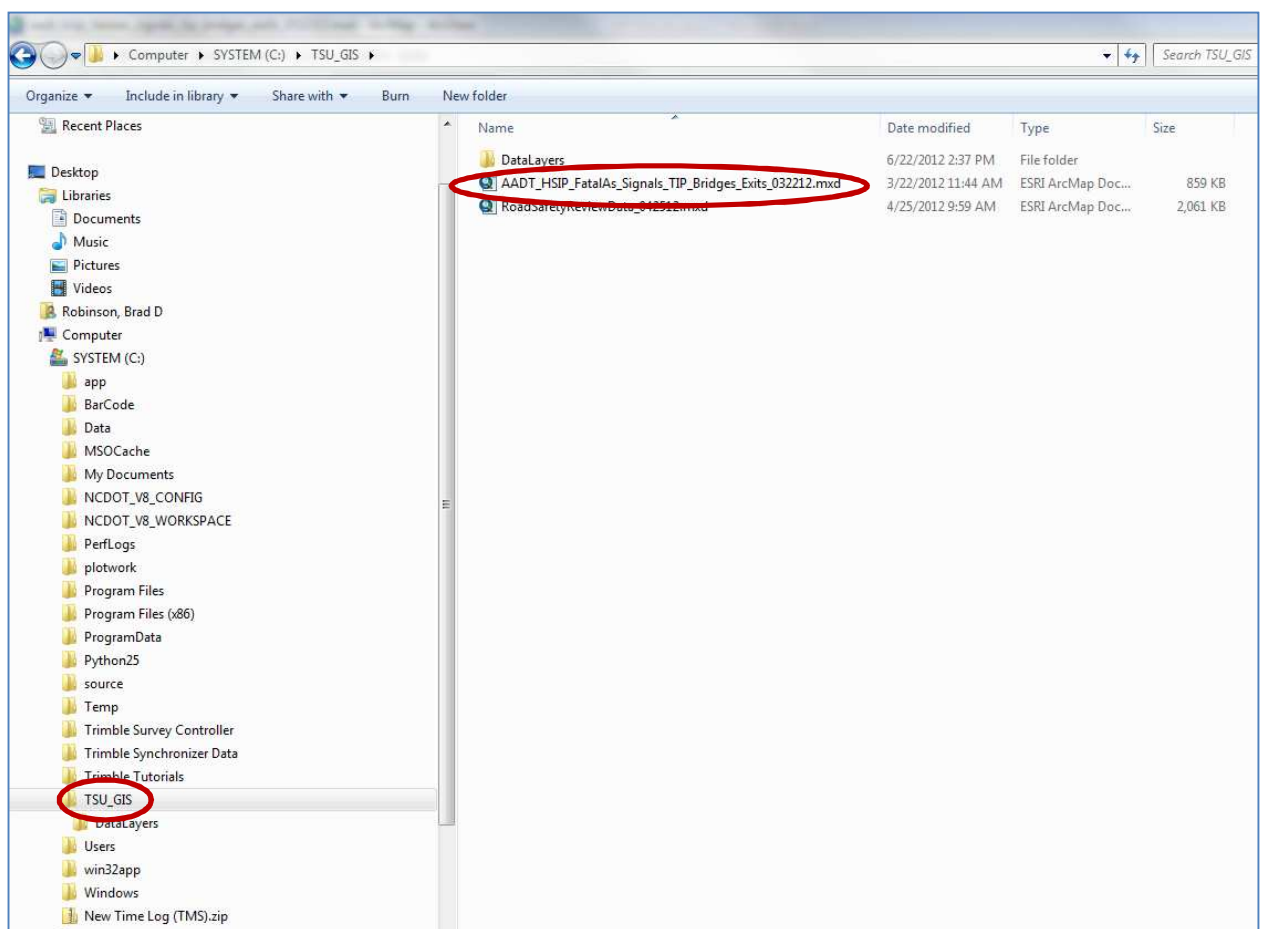
AADT Guide

1. Use GIS File “AADT_HSIP_FatalAs_Signals_TIP_Bridges_Exits_032212.mxd”

To download this file and the corresponding layers to your C:\ drive, open the following file located on the S:\ drive and allow it to unzip:

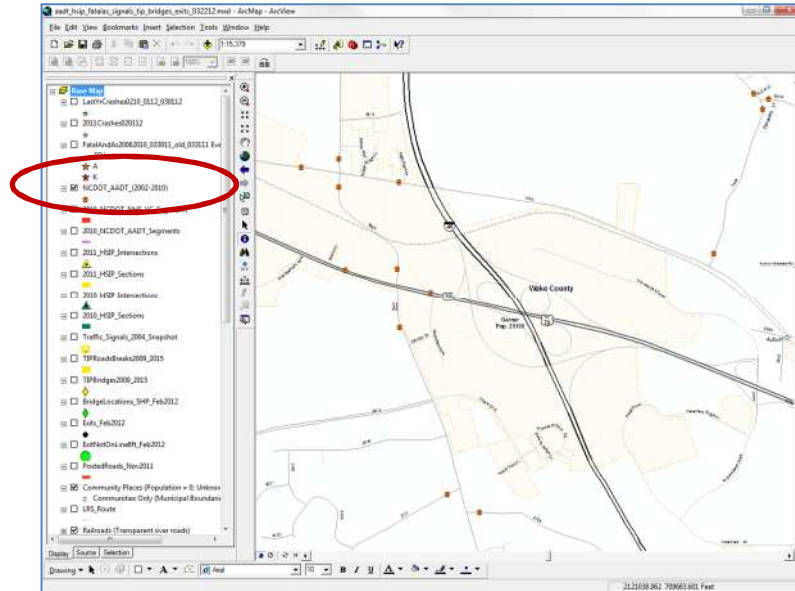
S:\TSU\SES\Temp\TSU_GIS.exe

This should create the folder C:\TSU_GIS. Do not save any other files in this folder as they could be deleted in the future as the data layers are updated.

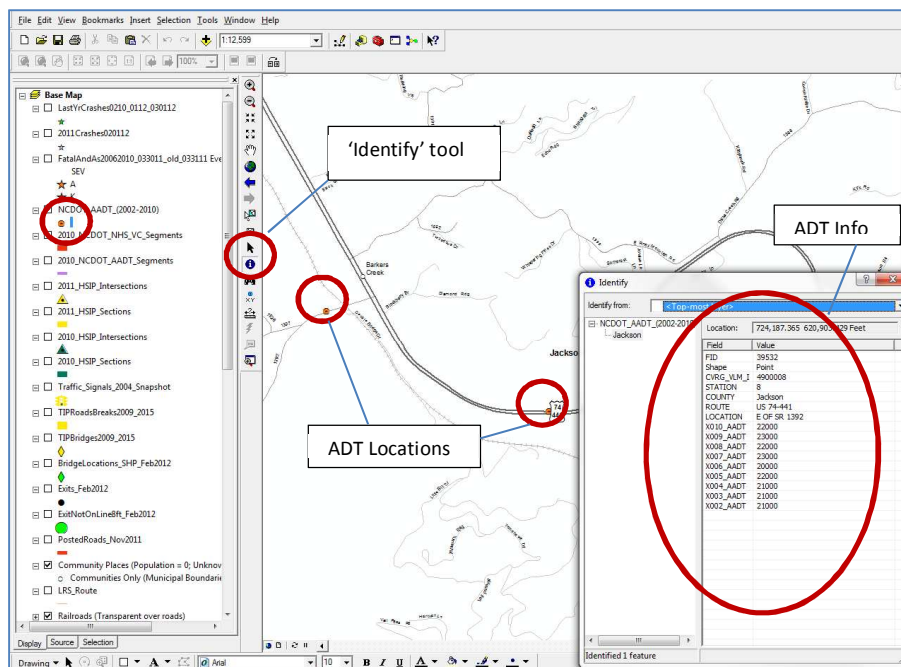


2. To find AADTs taken at a point.

Make sure the layer named "NCDOT_AADT_(2002-2010)" is checked.

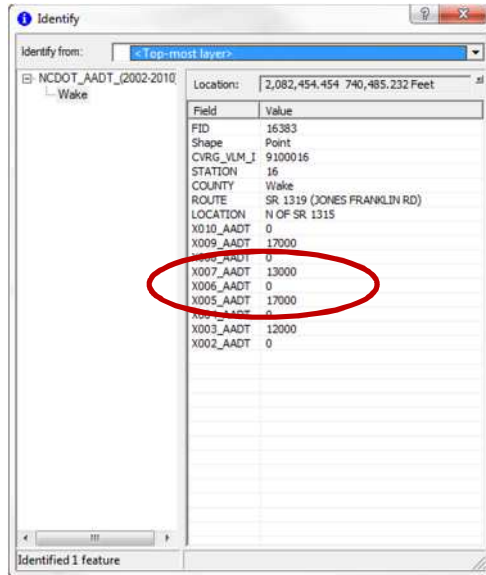


Locate the roadway you need AADTs for on the GIS map. Then, using the 'identify' tool, click on one of the small orange circles on the road to access the ADT information. A box pops up with information showing the road name, county name, a short description of the location where the ADTs were obtained, and the AADTs listed by year for 2002-2010. Primary roads should have ADTs for every year. Secondary roads should have AADTs for at least every other year.



3. Estimating missing AADT Years

Secondary routes will typically only have AADT data for every other year. Some routes might have even larger gaps in AADT. If only one year is missing, simply take the average of the surrounding two years to estimate the intervening year's AADT. For example, the 2006 AADT estimate for the location below would be 15,000 $((13,000+17,000)/2)$.



Identify from: <Top-most layer>

NCDOT_AADT_2002-2010

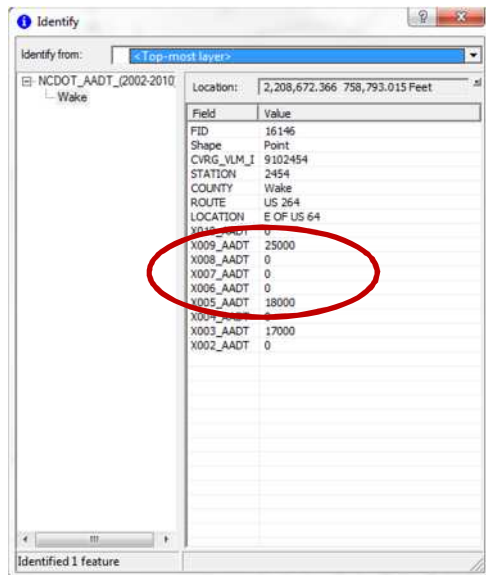
Wake

Location: 2,082,454.454 740,485.232 Feet

Field	Value
FID	16383
Shape	Point
CVRG_VLM_I	9100016
STATION	16
COUNTY	Wake
ROUTE	SR 1319 (JONES FRANKLIN RD)
LOCATION	N OF SR 1315
X010_AADT	0
X009_AADT	17000
X008_AADT	0
X007_AADT	13000
X006_AADT	0
X005_AADT	17000
X004_AADT	0
X003_AADT	12000
X002_AADT	0

Identified 1 feature

If several years are missing, take the difference between the two surrounding years and distribute it evenly through the missing years. For example, the AADT estimates for the section of US 264 shown below would be 19,750 for 2006, 21,500 for 2007, and 23,250 for 2008. These were determined by adding 1,750 to the previous year's AADT. $((25,000-18,000) / (2009-2005)=1,750$ per year).



Identify from: <Top-most layer>

NCDOT_AADT_2002-2010

Wake

Location: 2,208,672.366 758,793.015 Feet

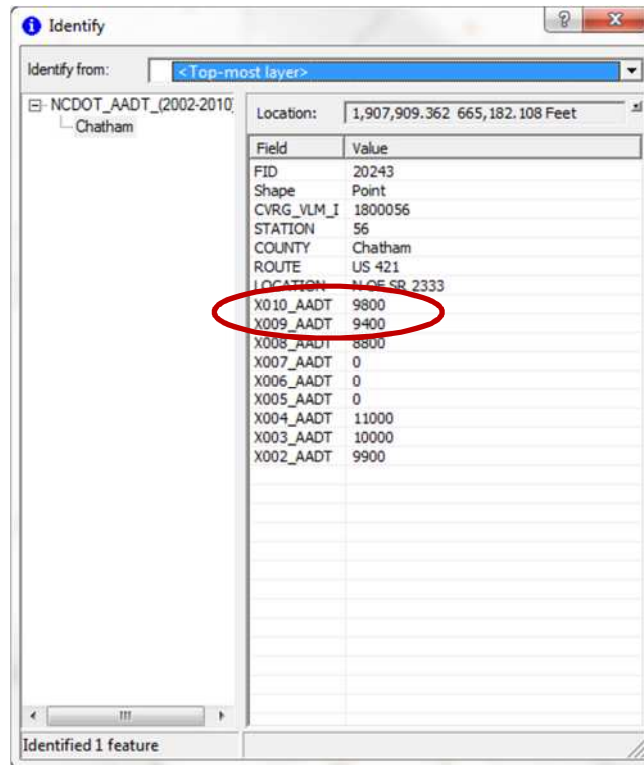
Field	Value
FID	16146
Shape	Point
CVRG_VLM_I	9102454
STATION	2454
COUNTY	Wake
ROUTE	US 264
LOCATION	E OF US 64
X010_AADT	0
X009_AADT	25000
X008_AADT	0
X007_AADT	0
X006_AADT	0
X005_AADT	18000
X004_AADT	0
X003_AADT	17000
X002_AADT	0

Identified 1 feature

Estimating missing AADT Years (continued)

For years before or after the years listed in the table, attempt to determine the growth rate by the previous (or subsequent) given years and apply that to the year you need. For example, the estimated 2011 AADT for the segment of NC 42 shown below would be 10,200 (after rounding). The yearly growth rate was approximately 4.1% from 2009 to 2010, so we assume that AADT grew by the same percentage from 2010 to 2011. $(9,800 + (.041 * 9,800)) = 10,200$

In some cases the growth rate might be negative.



Identify

Identify from: <Top-most layer>

Location: 1,907,909.362 665,182.108 Feet

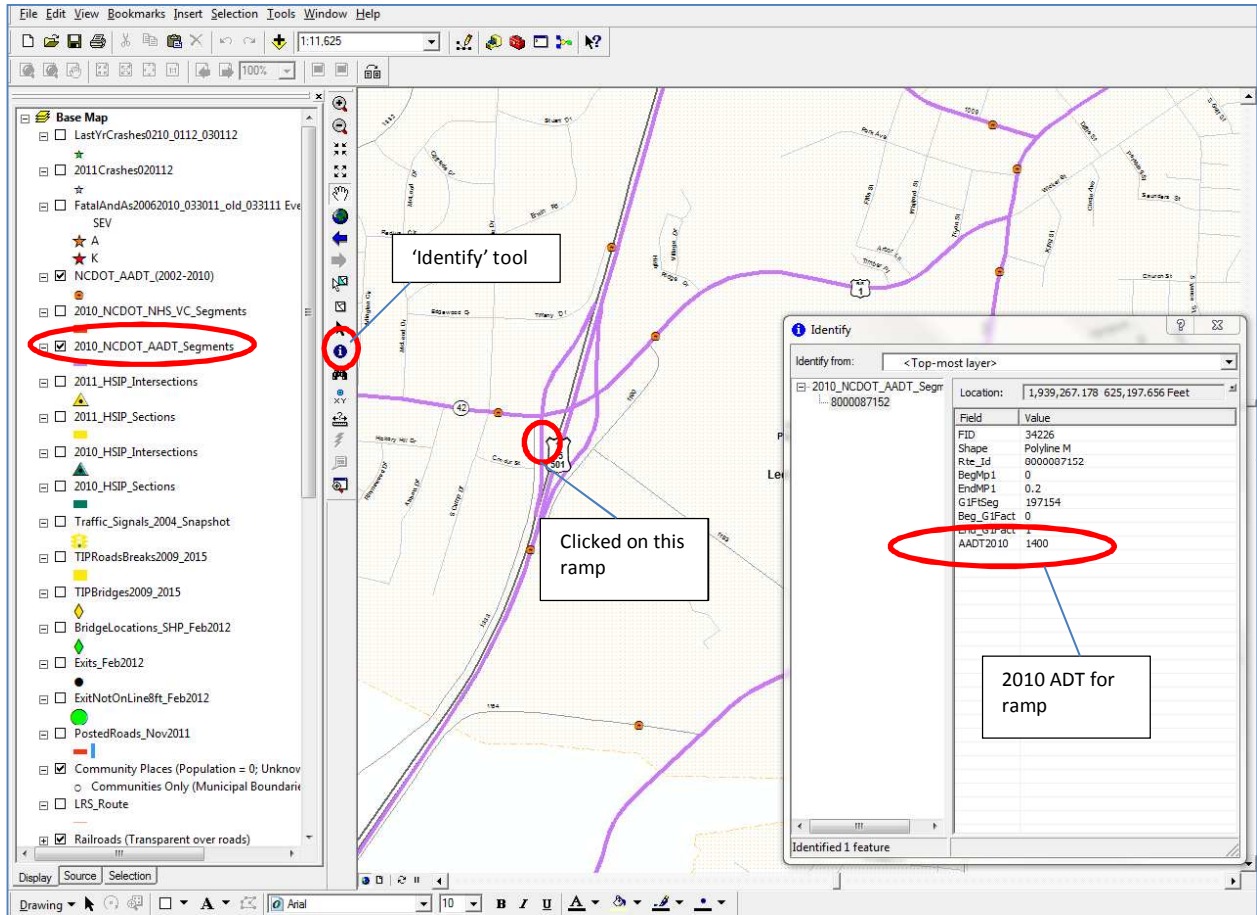
Field	Value
FID	20243
Shape	Point
CVRG_VLM_I	1800056
STATION	56
COUNTY	Chatham
ROUTE	US 421
LOCATION	NC 42 SR 2333
X010_AADT	9800
X009_AADT	9400
X008_AADT	8800
X007_AADT	0
X006_AADT	0
X005_AADT	0
X004_AADT	11000
X003_AADT	10000
X002_AADT	9900

Identified 1 feature

On some roadways AADTs vary greatly from year to year, sometimes going up, then down, then back up, then down again, etc. In cases like this you should use your engineering judgment instead of going by just the previous two years.

4. Ramp AADTs

Make sure the layer “2010_NCDOT_AADT_Segments” is selected. This layer contains 2010 AADT for sections of roadway, including most ramps. Use the ‘identify’ tool and click on the purple line to open the information box.



5. Estimating ramp AADTs

Only 2010 AADT ramp data is available at this time. In order to estimate ramp AATs for other years, assume that the ramp AADT grew (or decreased) at the same rate as the roadway from which vehicles are entering it. So, first turn on the AADT point layer, "NCDOT_AADT_(2002-2010)." Then find the closest point with AADT information on the roadway from which vehicles are entering the ramp. Determine the percent change in the AADT between 2010 and the year that you need and apply it to your 2010 ramp AADT.

For example, the map on the previous page shows that the 2010 AADT for the ramp from NC 42 to southbound US 1/15/501 was 1,400. If we want to estimate 2004 AADT for the ramp, after turning on the point AADT layer we would use the 'identify' tool on the point on NC 42 just west of the ramp (see map below) to open the AADT information table. The 2010 AADT for the section of NC 42 is 7,900 and the 2004 AADT is 8,800. The percent change between the 2010 and 2004 AADTs is approximately 11.4%. Apply the 11.4% to your 2010 ramp AADTs and you'll get a 2004 estimate of 1,560 for the ramp. ($1,400 + .114 * 1,400$)

